

Notice of Allowability	Application No.	Applicant(s)	
	09/576,442	JACKSON ET AL.	
	Examiner	Art Unit	
	Stephen J. Cherry	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment of 4-29-2004.
2. ☒ The allowed claim(s) is/are 21,23-26,28-35,38 and 44-50.
3. ☒ The drawings filed on 22 May 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Wei-Chen Nicholas Chen on 5-18-2004, 3-23-2005, and 5-31-2005.

The application has been amended as follows:

Please delete the abstract and replace with:

"An apparatus and method for calibrating machine vision measuring systems that have more than one camera are disclosed. A first calibration target is mounted in a fixed relationship to a first camera of the machine vision measuring system. A third camera mounted in a fixed relationship to a second camera of the machine vision measuring system. Second and third calibration targets are mounted in a fixed relationship to one another and viewable by the first camera and by the third camera. A data processor is programmed to compute calibration of the first camera and the second camera, based on a position of the second calibration target relative to the third calibration target and a position of the first camera with respect to the third camera. The apparatus and method provide a way to continuously measure the positions of the cameras used in the measuring system to calibrate the system."

Cancel withdrawn claims 1-20, 36, 37, and 39-43.

Delete claim 38 and replace with:

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38. (Currently Amended) A wheel alignment method of using a first measuring device and a second measuring device, wherein the first measuring device and the second measuring device are image-capturing devices, the method comprising the steps of:

mounting near the first measuring device a calibration device in which the position of the calibration device relative to the first device is predetermined; wherein the first measuring device is configured to measure a positional parameter of a first wheel of a vehicle and the calibration device is an image-capturing device;

mounting near the second measuring device a calibration target in which the position of the calibration target relative to the second device is predetermined; wherein the second measuring device is configured to measure a positional parameter of a second wheel of the vehicle;

storing a reference value that represents a reference position of the first calibration target relative to the third measuring-device;

repeatedly measuring the position of the calibration device relative to the calibration target;

accessing computer-stored data related to the position of the calibration device relative to the first measuring device and the position of the calibration target relative to the second measuring device;

using a computer, repeatedly determining the position of the first measuring device relative to the second measuring device based on:

the position of the calibration device relative to the first measuring device;

the position of the calibration target relative to the second measuring device; and

the position of the calibration device relative to the calibration target; and
calculating an alignment status of the vehicle based on the position of the first measuring device relative to the second measuring device, the positional parameter of the first vehicle wheel, and the positional parameter of the vehicle second wheel; and
periodically comparing the reference value with a new measurement of the relative position between the third measuring device and the calibration target.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MICHAEL NGHIEM
PRIMARY EXAMINER

SJC